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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,562	11/27/2001	Tadayuki Tsutsui	111223	7418

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EXAMINER

LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1775

6

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,562

Applicant(s)

TSUTSUI ET AL.

Examiner

LA VILLA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 7, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above, claim(s) 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, Claims 1-10 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the method claims of Group II include all of the limitations of Group I, and so there would be no serious burden in examining both groups of Claims. This is not found persuasive because the claims of Group II do not include all of the limitations of Group I, including, among others, the requirement of an iron-based alloy. Applicant's traversal alludes to possible rejoinder upon an indication of allowance of the claims of Group I, according to the requirements of MPEP 821.04. It is pointed out that, for mandatory rejoinder to be applicable, all of the limitations of an allowed claim of Group I would need to be included in the method claims of Group II to be rejoined.
2. The requirement is still deemed proper and is therefore made FINAL.
3. Claims 11-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
5. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 4 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. Regarding Claim 4, it is unclear what is the claimed amount of Ni, Cu, Mo, etc., when more than one of these elements is present. Is each to be present in an amount of 0.7 to 5 mass % or is the total amount to be present to be 0.7 to 5 mass %.

II. Regarding Claim 7, it is unclear whether the claimed application of residual stress by mechanical plating demands that the applied plating is retained in the claimed article.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

8. A person shall be entitled to a patent unless –

9. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Score USP 5,561,834. Score teaches an iron sintered alloy that has been compressed and treated with nitriding step; it obtains an oxide coating. See col. 2, line 33 through col.3, line 62; col. 4, line 29 through col. 5, line 7 in Score. The disclosed structure is that of a motor rotor. Such a structure may be incorporated in a structure in which it functions as a mechanical fuse. The absence of structure in the claimed mechanical fuse renders rejection appropriate. Score

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may not teach the claimed methods of imparting compressive stress, but does teach other methods of applying compaction, which would be expected to impart residual compressive stress. In the absence of specifically claimed method parameters, it would be expected that the disclosed articles of Score are encompassed by the claimed methods.

11. Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindberg et al. USP 5,703,304. Lindberg teaches iron sintered alloy in the form of test bars that have been compressed in which the alloy contains the claimed amounts of additive alloying elements of Claim 4; exposure to ordinary atmospheric conditions would be expected to generate a native oxide surface coating that is indistinguishable from the claimed oxide coating. See col. 1, line 44 through col. 2, line 24; col. 3, line 5 through col. 4, line 20; and col. 4, line 32 through col. 5, line 18 in Lindberg. The disclosed structure is that of a bar. Such a structure may be incorporated in a structure in which it functions as a mechanical fuse. The absence of structure in the claimed mechanical fuse renders rejection appropriate. Lindberg may not teach the claimed methods of imparting compressive stress, but does teach other methods of applying compaction, which would be expected to impart residual compressive stress. In the absence of specifically claimed method parameters, it would be expected that the disclosed articles of Lindberg are encompassed by the claimed methods.

12. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Church et al. USP 3,956,531. Church teaches sintered iron bars that are coated with

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chromate coatings in order to confer hardening qualities. See Abstract; col. 2, lines 1-40; col. 9, line 10 through col. 10, line 65; col. 14, lines 30-50; Table XI; and col. 15, line 3 through col. 16, line 13 in Church et al. The disclosed structure is that of a test piece. Such a structure may be incorporated in a structure in which it functions as a mechanical fuse. The absence of structure in the claimed mechanical fuse renders rejection appropriate.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Church et al. USP 3,956,531. Church teaches sintered iron bars that are coated with chromate coatings in order to confer hardening qualities. See Abstract; col. 2, lines 1-40; col. 9, line 10 through col. 10, line 65; col. 14, lines 30-50; Table XI;

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and col. 15, line 3 through col. 16, line 13 in Church et al. The disclosed structure is that of a test piece. Such a structure may be incorporated in a structure in which it functions as a mechanical fuse. The absence of structure in the claimed mechanical fuse renders rejection appropriate. Church does not exemplify a zinc chromate coating, but teaches that zinc chromate coatings may be effective. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a zinc chromate coating in place of the utilized chromate coating as Church teaches that such coatings are effective for enhancing hardening qualities

Allowable Subject Matter

16. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the reviewed prior art references anticipates or renders obvious a mechanical fuse of the claimed structure in the claimed device.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (703) 308-4428. The examiner can normally be reached on Monday through Friday.

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18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

19. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Michael La Villa
March 22, 2003

A handwritten signature in black ink, appearing to read 'Michael La Villa', written in a cursive style.